

## **ABSTRACT**

### **ION MILL PROCESS WITH SACRIFICIAL MASK LAYER TO FABRICATE POLE TIP FOR PERPENDICULAR RECORDING**

A method of fabrication of the write head of a perpendicular recording head allows for production of P3 pole tips of width less than 200 nm ( $200 \times 10^{-9}$  meters). The method includes fabricating the P2 flux shaping layer, depositing the P3 layer, depositing  
5 a layer of ion-milling resistant material, depositing at least one sacrificial layer, shaping the P3 layer into P3 pole tip, removing the at least one sacrificial layer to leave the P3 pole tip, and encapsulating the P3 pole tip.

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